



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,262	05/11/2005	Mark S. George	19113.0093U2	5307
23859	7590	12/30/2009	EXAMINER	
Ballard Spahr LLP SUITE 1000 999 PEACHTREE STREET ATLANTA, GA 30309-3915			GETZOW, SCOTT M	
			ART UNIT	PAPER NUMBER
			3762	
			MAIL DATE	DELIVERY MODE
			12/30/2009 PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/509,262

Applicant(s)

GEORGE ET AL.

Examiner

Scott M. Getzow

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

1. Claims 1-10,15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rohan et al (6,572,528) in view of Fox et al (7,087,008).

Rohan teaches that TMS can be used to enhance cognitive performance. See, for example, col., 2:9 which states that the subject is selected for enhancement of brain function using a magnetic field. Col. 3:52+ teach that selection for treatment can be based upon learning difficulties and memory impairments. Fox teaches that fMRI can be used to position coils to provide TMS in order to optimize treatment to the patient. See, for example, figure 11, box 410, and col. 5:10+ teaches that fMRI can be performed, which entails a 'task/control pair'. Col. 22:20+ teach that the desired site of stimulation can be defined by the use of fMRI. As is well known in the art, fMRI entails having the subject perform a task in order to determine what part of the patient's brain becomes activated. Thus, Fox is considered to teach that a model or maps of the functional state of the brain are computed in order to determine optimal placement of the coils to stimulate the brain using TMS. It would have been obvious to use the fMRI of Fox to help position the magnets for TMS in order to properly locate and stimulate the desired area of the patient's brain to enhance cognitive performance, as taught by Rohan. Further, such combination of features would not produce any unexpected results. Re claim 3, to use a control group is standard practice in medical studies in order to determine if the procedure works as desired. Re claim 5, the term 'sleep-deprived' is very broad and could encompass a wide variety of people. The subject matter of claims 6,7 is encompassed by the normal usage of the Rohan-Fox device. Re

claim 8, fMRI encompasses a behavior individualized imaging of the patient's brain. Re claim 10, such interleaving would not produce any unexpected results. Re claim 15, Fox teaches that a model can be made of the patient's brain including a functional-image derived' model, col. 5:33. To store a variety of functional models or maps in order to correctly position the arm of the magnetic stimulator would help facilitate the efficient use of the device. Col. 5:45 of Fox teaches that such model or map can be stored for subsequent use. Re claim 20, 'portable' is a broad term. Further, col. 3 of Rohan teaches portability. Re claim 21, such intended use can be accomplished by the system of Rohan and Fox. Further, no unexpected results would occur from such use.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Getzow whose telephone number is (571) 272-4946. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Scott M. Getzow/
Primary Examiner, Art Unit 3762